

WHAT IS CLAIMED IS:

1. An oligonucleotide comprising a nucleic acid sequence selected suitable for identifying an olfactory receptor gene or an allelic variant thereof, said olfactory receptor gene being selected from the group consisting of SEQ ID NOs: 79-104.
2. The oligonucleotide of claim 1, further comprising a detectable moiety attached to said nucleic acid sequence.
3. The oligonucleotide of claim 2, wherein said detectable moiety is selected from the group consisting of a dye, a fluorophore, an enzyme, a ligand and a radioisotope.
4. The oligonucleotide of claim 1, wherein the oligonucleotide is selected from the group consisting of SEQ ID NOs: 1-78.
5. The oligonucleotide of claim 1, wherein the oligonucleotide is an SNP-specific oligonucleotide.
6. The oligonucleotide of claim 1, wherein the oligonucleotide is a primer extension oligonucleotide.
7. A kit for identifying an olfactory receptor gene and/or an allelic variant thereof, the kit comprising at least oligonucleotide having a nucleic acid sequence selected suitable for identifying the olfactory receptor gene and/or the allelic variant thereof.
8. The kit of claim 7, further comprising reagents suitable for detecting identification of the olfactory receptor gene and/or the allelic variant thereof by said at least one oligonucleotide.

9. The kit of claim 7, further comprising packaging material identifying said at least oligonucleotide as being utilizable in detecting the olfactory receptor gene and/or the allelic variant thereof.

10. The kit of claim 7, wherein the olfactory receptor gene is selected from the group consisting of SEQ ID NOs: 79-104.

11. The kit of claim 7, wherein said at least one oligonucleotide is selected from the group consisting of SEQ ID NOs: 1-78.

12. The kit of claim 7, wherein said at least oligonucleotide includes a detectable moiety attached to said nucleic acid sequence.

13. The kit of claim 12, wherein said detectable moiety is selected from the group consisting of a dye, a fluorophore, an enzyme, a ligand and a radioisotope.

14. An array for detecting the presence or absence of at least one allelic variant of an olfactory receptor gene in a subject, the array comprising at least one oligonucleotide being contained in or attached to a support, said at least oligonucleotide having a nucleic acid sequence selected suitable for specifically identifying the at least one allelic variant of the olfactory receptor gene.

15. The array of claim 14, further comprising at least one additional oligonucleotide having a nucleic acid sequence selected suitable for specifically identifying the olfactory receptor gene.

16. The array of claim 15, wherein the olfactory receptor gene is selected from the group consisting of SEQ ID NOs: 79-104.

17. The array of claim 14, wherein said at least one oligonucleotide is selected from the group consisting of SEQ ID NOs: 27-78.

18. An array for typing a subject according to presence or absence of allelic variants of olfactory receptor genes, the array comprising a plurality of oligonucleotides each being attached to a support, said plurality of oligonucleotides include at least one typing oligonucleotide having a sequence selected suitable for specifically identifying presence or absence of a specific allelic variant of a specific olfactory receptor gene in the subject.

19. The array of claim 18, wherein said plurality of oligonucleotides also include at least one reference oligonucleotide having a sequence selected suitable for specifically identifying said specific olfactory receptor gene.

20. The array of claim 18, wherein said support is a chip.

21. The array of claim 18, wherein said at least one typing oligonucleotide is selected from the group consisting of SEQ ID NOs: 27-78.

22. The array of claim 19, wherein said at least one reference oligonucleotide is selected from the group consisting of SEQ ID NOs: 1-26.

23. A method of typing a subject according to presence or absence of allelic variants of olfactory receptor genes, the method comprising detecting the presence or absence of at least one allelic variant of an olfactory receptor gene in a biological sample of the subject thereby typing the subject.

24. The method of claim 23, further comprising detecting the presence or absence of said olfactory receptor gene in said biological sample of the subject.

25. The method of claim 23, wherein the olfactory receptor gene is selected from the group consisting of SEQ ID NOs: 79-104.

26. The method of claim 23, wherein said detecting the presence or absence of at least one allelic variant of said olfactory receptor gene is effected using at least one oligonucleotide selected from the group consisting of SEQ ID NOs: 27-78.

27. The method of claim 24, wherein said detecting the presence or absence of said olfactory receptor gene is effected using at least one oligonucleotide selected from the group consisting of SEQ ID NOs: 1-26.

28. The method of claim 23, wherein said detecting the presence or absence of at least one allelic variant of said olfactory receptor gene is effected by detecting DNA and/or mRNA sequences.

29. The method of claim 23, wherein said detecting the presence or absence of at least one allelic variant is effected using at least one oligonucleotide selected from the group consisting of SEQ ID NOs: 27-78.

30. The method of claim 24, wherein said detecting the presence or absence of said olfactory receptor gene is effected using at least one oligonucleotide selected from the group consisting of SEQ ID NOs: 1-26.

31. A nucleic acid construct comprising a polynucleotide encoding an olfactory receptor gene and/or an allelic variant thereof, said olfactory receptor gene being selected from the group consisting of SEQ ID Nos: 79-104 and a promoter for directing transcription of said olfactory receptor gene or said allelic variant thereof in a cell.

32. A cell comprising the nucleic acid construct of claim 31.

33. The cell of claim 31, wherein the cell is a mammalian cell.